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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,409	09/30/2003	Richard Thompson	3645-0114P	2702
2292 7590 11/16/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER SODERQUIST, ARLEN	
			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 11/16/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

**Office Action Summary**

Application No.

10/673,409

Applicant(s)

THOMPSON ET AL.

Examiner

Arlen Soderquist

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-16 and 20 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).
2. The attempt to incorporate subject matter into this application by reference to the cited papers beginning at page 22 is ineffective because as noted above the incorporation by reference of a publication is not proper.
3. Claims 5-7 and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Alexa Fluor 594 is a trade name or Trademark which identifies the producer of the fluorophore rather than generic terminology that defines the fluorophore. Since the supplier of the trademarked product could change the composition of or dye in the product without changing the trademark name or use multiple names to refer to the same indicator, the trademark name of the product does not constitute a definite name for the indicator used. Applicant is required to use generic terminology to identify the indicator. See below for information on names other than "ALEXA FLUOR 594" for the indicator.
4. Claims 1-2, 5-16 and 20 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the donor fluorophore being a fluorescent sulfonamide, does not reasonably provide enablement for any donor fluorophore. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The claims are a method of measuring zinc and applicant has only shown that fluorescent sulfonamides will complex with zinc in conjunction with zinc being complexed by carbonic anhydrase. In a manner that produces the ability to excite the acceptor fluorophore at two distinct wavelengths to produce the required fluorescence ratio.
5. Claims 3-4 and 17-19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of

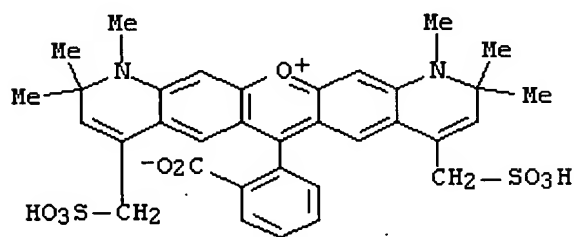
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the base claim and any intervening claims. The art of record fails to teach or fairly suggest the methods as covered by these claims.

6. Applicant's arguments filed September 5, 2007 have been fully considered but they are not persuasive. Relative to the art, the arguments were persuasive. However the following is the result of a search of the trademark ALEXA FLUOR 594 in the registry file of chemical abstracts.

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L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 247145-86-4 REGISTRY  
ED Entered STN: 15 Nov 1999  
CN Pyrano[3,2-g:5,6-g']diquinolin-13-ium, 6-[2,4(or 2,5)-dicarboxyphenyl]-1,2,10,11-tetrahydro-1,2,2,10,10,11-hexamethyl-4,8-bis(sulfomethyl)-, inner salt (CA INDEX NAME)  
OTHER NAMES:  
CN Alexa 594  
CN Alexa Fluor 594  
DR 788807-34-1  
MF C35 H34 N2 O11 S2  
CI IDS, COM  
SR CA  
LC STN Files: BIOSIS, CA, CAPLUS, CHEMCATS, TOXCENTER, USPAT2, USPATFULL



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\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

116 REFERENCES IN FILE CA (1907 TO DATE)  
48 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
122 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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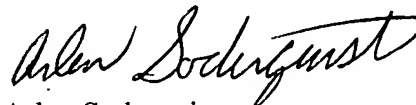
As can be clearly seen, chemical abstracts has both registered the compound and given it an index name. Furthermore, the compound is known by two similar trademarks or tradenames. Thus, there is a clarity problem resulting from use of the trademark or tradename in the claims. Examiner also points to US Patent 6,130,101 in which example 14 teaches the preparation of compound 7 that appears to have the structure above. Presumably this compound is within the scope of the claims. It is noted that the above patent will expire before the instant application will expire if it is patented. Thus there would be a time that another supplier could legally make the compound under their own tradename and having a generic name in the instant claims would prevent one from infringing the instant invention and claiming that because they did not use ALEXA FLUOR 594, they did not infringe claims 5-7 and 11-13. The arguments are moot with respect to the new grounds of rejection.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references relate to carbonic anhydrase and zinc or fluorescent energy transfer methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arlen Soderquist whose telephone number is (571) 272-1265. The examiner can normally be reached on Monday-Thursday and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Arlen Soderquist  
Primary Examiner  
Art Unit 1797